

**WHAT IS CLAIMED IS:**

1. A method for use in a controller in a radio network including a number of cells, in which network a user equipment communicates with at least one cell defining an active set, the user equipment (UE) having a velocity vector including position, speed, and direction, comprising:

receiving information related to the velocity vector;

filtering a neighbor cell list associated with active set using the velocity vector related information to create a filtered neighbor cell list; and

transmitting the filtered neighbor cell list to the user equipment thereby enabling measurement of pilot signal strength for cells in the filtered neighbor cell list.

2. A method according to claim 1, wherein making the filtering depends on a position of the user equipment and includes removing cells that are further away than a distance threshold, are outside a certain area, or have a pilot tone strength under a level threshold.

3. A method according to claim 1, wherein the filtering depends on the direction of the user equipment, the method further comprising:

filtering out one or more cells not in said direction.

4. A method according to claim 1, further comprising:

selecting cells that are to be filtered out from the neighbor cell list depending on the speed of the user equipment,

wherein fewer cells are filtered out from the neighbor cell list when the speed is higher than when the speed is lower.

5. A method according to claim 2, wherein when a distance threshold or a level threshold is used, the method further comprises:

changing the distance threshold or the level threshold depending on the speed of the user equipment.

6. A method according to claim 1, wherein when the network includes at different hierarchical level cells, the filtering depends on the speed of the user equipment, the method further comprising:

filtering out from the neighbor cell list one or more larger cells when the speed is under a speed threshold, and

filtering out from the neighbor cell list one or more smaller cells when the speed is over the speed threshold.

7. A method according to claim 1, wherein when the network includes cells using different radio access technologies, the filtering depends on which radio access technology is used in the different cells.

8. A method according to claim 1, wherein when the network is close to another network, the filtering depends on to which network different cells are connected.

9. A method according to claim 1, further comprising:

using GPS technology, a round trip time, or an observed time difference of arrival to estimate a position of the user equipment.

10. A method according to claim 1, further comprising:

using change in position to estimate a direction or a speed of the user equipment.

11. A method according to claim 1, further comprising:

using a Doppler effect in frequency to estimate a speed of the user equipment.

12. A method according to claim 1, wherein when the controller is a serving controller, the method further comprises:

receiving the neighbor cell list from a drift controller including extra cell information, and

wherein the filtering also depends on the extra cell information.

13. A method according to claim 1, wherein when the controller is a drift controller, the method further comprises:

receiving a velocity vector related information from a serving controller,  
and

wherein the filtering depends on the velocity vector related information and on extra cell information.

14. A method for use in a user equipment communicating with at least one cell defining an active set in a radio network, the user equipment having a velocity vector including position, speed, and direction, comprising:

transmitting information related to the velocity vector;

receiving a filtered neighbor cell list generated using the velocity vector related information and a neighbor cell list associated with the active set; and

measuring pilot signal strength for the cells in the filtered neighbor cell list.

15. A method according to claim 14, further comprising:

using GPS technology, round trip time, or observed time difference of arrival to estimate position of the user equipment.

16. A method according to claim 14, further comprising:

using change in position to estimate direction or speed of the user equipment.

17. A method according to claim 14, further comprising

using a Doppler effect in frequency to estimate speed of the user equipment.

18. A controller for use in a radio network including a number of cells in which network a user equipment communicates with at least one cell defining an active set, the user equipment having a velocity vector including position, speed, and direction, wherein the controller is configured as follows:

to receive information related to the velocity vector;

to filter a neighbor cell list associated with the active set depending on the velocity vector information to create a filtered neighbor cell list; and

to transmit the filtered neighbor cell list to the user equipment thereby enabling measurement by the user equipment of pilot signal strength for cells in the filtered neighbor cell list.

19. A controller according to claim 18, wherein depending on the position of the user equipment, the controller is arranged to filter out from the neighbor cell list one or more cells that are further away from the user equipment than a distance threshold, that are outside a certain area, or that have a pilot strength under a level threshold.

20. A controller according to claim 18, wherein depending on the direction of the user equipment, the controller is arranged to filter out from the neighbor cell list one or more of the cells that are not in said direction.

21. A controller according to claim 18, wherein the controller is arranged to select a number of cells to be filtered out from the neighbor cell list depending on the speed of the user equipment so that fewer cells are filtered out from the neighbor cell list when the speed is higher than when the speed is lower.

22. A controller according to claim 19, wherein the controller is arranged to change the distance threshold or the level threshold depending on the speed of the user equipment.

23. A controller according to claims 18, wherein when the network includes cells on different hierarchical levels, the controller is arranged to filter out from the neighbor cell list one or more larger cells when the user equipment speed is under a speed threshold, and to filter out from the neighbor cell list one or more of smaller cells when the user equipment speed is over the speed threshold.

24. A controller according to claims 18, wherein when the network includes cells using different radio access technologies, the controller is arranged to filter

the neighbor cell list depending on which radio access technology is used in the different cells.

25. A controller according to claims 18, wherein when the network is close to another network, the controller is arranged to filter the neighbor cell list depending on which network different cells are connected.

26. A controller according to claims 18, wherein the controller is arranged to use GPS technology, round trip time, or observed time difference of arrival to estimate a position of the user equipment.

27. A controller according to claim 18, wherein the controller is arranged to use change in position to estimate a direction or a speed of the user equipment.

28. A controller according to claim 18, wherein the controller is arranged to use a Doppler effect in frequency to estimate a speed of the user equipment.

29. A serving controller according to claim 18, wherein the serving controller is arranged to receive the neighbor cell list from a drift controller and extra cell information, and to filter the neighbor cell list depending on the extra cell information.

30. A drift controller according to claim 18, wherein the drift controller is arranged to receive velocity vector related information from a serving controller, and to filter the neighbor cell list depending on the velocity vector related information and on extra cell information.

31. A user equipment for in use communicating with at least one cell defining an active set in a radio network and having a velocity vector including position, speed, and direction, wherein the user equipment is arranged to perform the following:

transmit information related to the velocity vector;

receive a filtered neighbor cell list created by filtering a neighbor cell list associated with the active set depending on the velocity vector related information; and

measure a pilot signal strength for one or more cells in the filtered neighbor cell list.

32. A user equipment according to claim 31, wherein the user equipment is arranged to use GPS technology, a round trip time, or an observed time difference of arrival to estimate a position of the user equipment.

33. A user equipment according to claim 31, wherein the user equipment is arranged to use a change in position to estimate a direction or a speed of the user equipment.

34. A user equipment according to claim 31, wherein the user equipment is arranged to use a Doppler effect in frequency to estimate a speed of the user equipment.